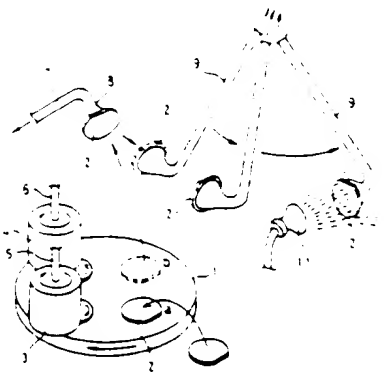
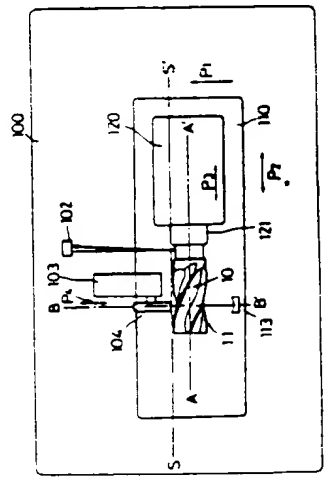
(54) METHOD FOR GRINDING SEMICONDUCTOR WAFER
(11) 63-256342 (A) (43) 24.10.1988 (19) JP
(21) Appl. No. 62-88202 (22) 10.4.1987
(71) SUMITOMO ELECTRIC IND LTD (72) NOBORU GOTO(1)
(51) Int. Cl⁴. B24B1/00,H01L21/304,H01L21/306,B24B7/20,B24B37/00



PURPOSE: To eliminate difficulties in handling of semiconductor wafer by shifting a ground semiconductor wafer to an attraction pad, spraying the grinding surface with a etching liquid like a shower for grinding and cleaning said surface after removing working affected layers.

CONSTITUTION: A ground semiconductor wafer 2 is transferred from a table 1 to a first attraction pad 8 and from said pad 8 to a second attraction pad 10 without any difficulties on handling. Then, for example while shower-like etching liquid from a nozzle 11 removes completely and surely working affected layers, ground chips caused by grinding wheel are removed. Thus, the semiconductor wafer 2 is not cracked during the etching.

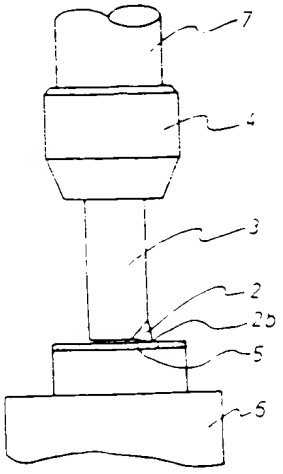
(54) TOOL POLISHER
(11) 63-256343 (A) (43) 24.10.1988 (19) JP
(21) Appl. No. 62-91329 (22) 14.4.1987
(71) HIROMI TAKENOUCHI(2) (72) TSUNEO IGARASHI
(51) Int. Cl⁴. B24B3/24,B24B3/18,B24B49/12



PURPOSE: To repolish a tool simply in a short time by controlling the movement of a movable bed such that a light sensor means always receives laser beam reflected from the blade surface of tool as it rotates.

CONSTITUTION: A blade surface tracking sensor 113 is provided with a laser diode for projecting laser beam having proper frequency to the peripheral surface of a tool 10 to be ground and two light sensors for receiving laser beam reflected from theperipheral surface. And as the said tool 10 is rotated, the forward and backward movement of a movable holding bed 120 is controlled such tha' the laser beam diffused and reflected from the blade surface 11 id projected to two light sensors simultaneously. A grinder 104 is operated to polish the corresponding position at the opposite side to said tool 10 with polishing surfaces S-S'. Thus, the movable holding bed 120 is moved according to the indication from the blade surface tracking sensor 113 so that said bed 120 can accurately automatically repolish the blade surface 11 with-out getting out of the blade surface 11 of said tool 10.

(54) FLY EDGE POLISHING METHOD
(11) 63-256344 (A) (43) 24.10.1988 (19) JP
(21) Appl. No. 62-91012 (22) 15.4.1987
(71) HITACHI LTD (72) MASAMI MASUDA(1)
(51) Int. Cl⁴. B24B3/34



PURPOSE: To easily polish a fly edge with high accuracy without any influence of mounting error of fly edge, by holding the fly edge similarly to that in cut working, rotating it in the opposite direction to that of working and polishing the fly edge with the land portion being pressed against a grinding wheel.

CONSTITUTION: A fly edge 2 is clamped by a tool holder 3 which is chucked by a chuck 4 of a spindle 5 of a working machine like a milling machine for preparatory plan, and a grinding wheel 5 is mounted on a table 6 of working machine. And the fly edge 2 is adapted to contact the grinding wheel 5 to be polished by the reverse rotation to the normal usage condition. Since the fly edge 2 in polishing is held similarly to that in the normal cut working and rotated in the opposite direction to same, the land 2b can be polished easily and accurately with-out any effects of mounting error of fly edge 2. As a result the fly edge bears accurately against the surface of a material to be ground to prevent it from the degradation of surface roughness.